LISTING OF CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A medium whereon an image data interpolation program has been recorded to implement pixel interpolation to image data of an image represented in multi-tone dot matrix pixels on a computer, said medium with the image data interpolation program recorded thereon, after being set ready for use on a computer, making the computer perform:

a function of image data acquisition that acquires said image data[[,]];

a first interpolation processing function that interpolates pixels to said image data without decreasing the degree of tone value difference between the existing pixels;

a second interpolation processing function that interpolates pixels to said image data without affecting the gradation of the tones of the image;

a first function of determining a blending ratio that appraises the attribute of the image, based on reference pixels around a pixel of target of interpolation and determines a blending ratio between pixel interpolations generated by said first interpolation processing and those generated by said second interpolation processing, based on the appraised attribute;

a function of image data blending that blends the image data of interpolations generated by said first interpolation processing function and the corresponding data generated by said second interpolation processing function at the determined blending ratio; and

an image data output function that outputs the thus blended data as interpolation-processed image data.

Claim 2 (Original): The medium with the image data interpolation program recorded thereon according to claim 1, wherein:

3

said first interpolation processing function is able to execute pattern matching

interpolation which is performed, according to a predetermined rule, when a given pattern

exists in the reference pixels, and nearest neighbor interpolation.

Claim 3 (Original): The medium with the image data interpolation program recorded

thereon according to claim 1, wherein:

said first function of determining a blending ratio determines a blending ratio by

means of an evaluation function that depends on the data of said reference pixels.

Claim 4 (Original): The medium with the image data interpolation program recorded

thereon according to claim 1, wherein:

said first function of determining a blending ratio determines a blending ratio, based

on the number of discrete tone values appearing in said reference pixels.

Claim 5 (Original): The medium with the image data interpolation program recorded

thereon according to claim 4, wherein:

said first function of determining a blending ratio gives a blending ratio so that only

said first interpolation processing will be active when the number of discrete tone values

appearing in said reference pixels is less than a predetermined threshold.

Claim 6 (Original): The medium with the image data interpolation program recorded

thereon according to claim 4, wherein:

said first function of determining a blending ratio increases the percentage of said first

interpolation processing in direct proportion to the increase of the width of the range within

which the tone values of said reference pixels fall when determining a blending ratio.

Claim 7 (Original): The medium with the image data interpolation program recorded thereon according to claim 4, wherein:

the tone values of said reference pixels are the luminance values of said reference pixels.

Claim 8 (Original): The medium with the image data interpolation program recorded thereon according to claim 1, wherein:

said medium, moreover, makes the computer perform:

a function of print quality parameters acquisition that acquires print quality parameters, according to which a printer prints an image from said image data;

a second function of determining a blending ratio that determines a blending ratio between the pixels interpolated by said first interpolation processing and those interpolated by said second interpolation processing, based on said print quality parameters acquired; and

a function of print control processing that executes print control processing, based on the data of pixel interpolations blended at said blending ratio.

Claim 9 (Original): The medium with the image data interpolation program recorded thereon according to claim 8, wherein:

said second function of determining a blending ratio determines a blending ratio by means of an evaluation function that depends on the print quality parameters acquired.

Claim 10 (Original): The medium with the image data interpolation program recorded thereon according to claim 8, wherein:

said second function of determining a blending ratio sets a higher percentage of said

second interpolation processing when determining a blending ratio, when said print quality

parameters acquired indicate higher print quality.

Claim 11 (Original): The medium with the image data interpolation program

recorded thereon according to claim 8, wherein:

said second function of determining a blending ratio inhibits only said first

interpolation processing from being active when said print quality parameters acquired

indicate high print quality.

Claim 12 (Original): An image data interpolation method interpolating pixels to

image data of an image represented in multi-tone dot matrix pixels comprising:

a step of image data acquisition that acquires said image data;

a first interpolation processing step that interpolates pixels to said image data without

decreasing the degree of tone value difference between the existing pixels;

a second interpolation processing step that interpolates pixels to said image data

without affecting the gradation of the tones of the image;

a first step of determining a blending ratio that appraises the attribute of the image,

based on reference pixels around a pixel of target of interpolation and determines a blending

ratio between pixel interpolations generated by said first interpolation processing and those

generated by said second interpolation processing, based on the appraised attribute;

a step of image data blending that blends the image data of interpolations generated

by said first interpolation processing step and the corresponding data generated by said

second interpolation processing step at the determined blending ratio; and

an image data output step that outputs the thus blended data as interpolation-processed

image data.

Claim 13 (Original): The image data interpolation method according to claim 12,

wherein:

said first interpolation processing step is able to execute pattern matching

interpolation which is performed, according to a predetermined rule, when a given pattern

exists in the reference pixels, and nearest neighbor interpolation.

Claim 14 (Original): The image data interpolation method according to claim 12,

wherein:

said first step of determining a blending ratio determines a blending ratio by means of

an evaluation function that depends on the data of said reference pixels.

Claim 15 (Original): The image data interpolation method according to claim 12,

wherein:

said first step of determining a blending ratio determines a blending ratio, based on

the number of discrete tone values appearing in said reference pixels.

Claim16 (Original): The image data interpolation method according to claim 15,

wherein:

said first step of determining a blending ratio gives a blending ratio so that only said

first interpolation processing will be active when the number of discrete tone values

appearing in said reference pixels is less than a predetermined threshold.

Claim 17 (Original): The image data interpolation method according to claim 15, wherein:

said first step of determining a blending ratio increases the percentage of said first interpolation processing in direct proportion to the increase of the width of the range within which the tone values of said reference pixels fall when determining a blending ratio.

Claim18 (Original): The image data interpolation method according to claim 15, wherein:

the tone values of said reference pixels are the luminance values of said reference pixels.

Claim 19 (Original): The image data interpolation method according to claim 12, further comprising: a step of print quality parameters acquisition that acquires print quality parameters, according to which a printer prints an image from said image data;

a second step of determining a blending ratio that determines a blending ratio between the pixels interpolated by said first interpolation processing and those interpolated by said second interpolation processing, based on said print quality parameters acquired; and

a step of print control processing that executes print control processing, based on the data of pixel interpolations blended at said blending ratio.

Claim 20 (Original): The image data interpolation method according to claim 19, wherein:

said second step of determining a blending ratio determines a blending ratio by means of an evaluation function that depends on the print quality parameters acquired.

Claim 21 (Original): The image data interpolation method according to claim 19, wherein:

said second step of determining a blending ratio sets a higher percentage of said second interpolation processing when determining a blending ratio, when said print quality parameters acquired indicate higher print quality.

Claim 22 (Original): The image data interpolation method according to claim 19, wherein:

said second step of determining a blending ratio inhibits only said first interpolation processing from being active when said print quality parameters acquired indicate high print quality.

Claim 23 (Original): An image data interpolation apparatus for interpolating pixels to image data of an image represented in multi-tone dot matrix pixels comprising:

an image data acquisition unit that acquires said image data;

a first interpolation processing unit that interpolates pixels to said image data without decreasing the degree of tone value difference between the existing pixels;

a second interpolation processing unit that interpolates pixels to said image data without affecting the gradation of the tones of the image;

a first unit of determining a blending ratio that appraises the attribute of the image, based on reference pixels around a pixel of target of interpolation and determines a blending ratio between pixel interpolations generated by said first interpolation processing and those generated by said second interpolation processing, based on the appraised attribute;

an image data blending unit that blends the image data of interpolations generated by

said first interpolation processing step and the corresponding data generated by said second

interpolation processing step at the determined blending ratio; and

an image data output unit that outputs the thus blended data as interpolation-processed

image data.

Claim 24 (Original): The image data interpolation apparatus according to claim 23,

wherein:

said first interpolation processing unit is able to execute pattern matching

interpolation which is performed, according to a predetermined rule, when a given pattern

exists in the reference pixels, and nearest neighbor interpolation.

Claim 25 (Original): The image data interpolation apparatus according to claim 23,

wherein:

said first unit of determining a blending ratio determines a blending ratio by means of

an evaluation function that depends on the data of said reference pixels.

Claim 26 (Original): The image data interpolation apparatus according to claim 23,

wherein:

said first unit of determining a blending ratio determines a blending ratio, based on

the number of discrete tone values appearing in said reference pixels.

Claim 27 (Original): The image data interpolation apparatus according to claim 26,

wherein:

said first unit of determining a blending ratio gives a blending ratio so that only said

first interpolation processing will be active when the number of discrete tone values

appearing in said reference pixels is less than a predetermined threshold.

Claim 28 (Original): The image data interpolation apparatus according to claim 26,

wherein:

said first unit of determining a blending ratio increases the percentage of said first

interpolation processing in direct proportion to the increase of the width of the range within

which the tone values of said reference pixels fall when determining a blending ratio.

Claim 29 (Original): The image data interpolation apparatus according to claim 26,

wherein:

the tone values of said reference pixels are the luminance values of said reference

pixels.

Claim 30 (Original): The image data interpolation apparatus according to claim 23,

further comprising:

a print quality parameters acquisition unit that acquires print quality parameters,

according to which a printer prints an image from said image data;

a second unit of determining a blending ratio that determines a blending ratio between

the pixels interpolated by said first interpolation processing and those interpolated by said

second interpolation processing, based on said print quality parameters acquired; and

a print control processing unit that executes print control processing, based on the data

of pixel interpolations blended at said blending ratio.

Claim 31 (Original): The image data interpolation apparatus according to claim 30, wherein:

said second unit of determining a blending ratio determines a blending ratio by means of an evaluation function that depends on the print quality parameters acquired.

Claim 32 (Original): The image data interpolation apparatus according to claim 30, wherein:

said second unit of determining a blending ratio sets a higher percentage of said second interpolation processing when determining a blending ratio, when said print quality parameters acquired indicate higher print quality.

Claim 33 (Original): The image data interpolation apparatus according to claim 30, wherein:

said second unit of determining a blending ratio inhibits only said first interpolation processing from being active when said print quality parameters acquired indicate high print quality.in the drawings

Claim 34 (New): The medium with the image interpolation program recorded thereon according to Claim 2, wherein:

said pattern matching interpolation refers to pixels determined based on the given pattern.